

What is claimed is:

1. A power line communication device for vehicle comprising:

a voltage follower configured to receive a reception communication
5 signal with an input terminal, to generate a standard level for comparison
which follows direct-current voltage fluctuation at the input terminal, and
to output the standard level for comparison and the communication signal;
and

a comparator unit configured to receive the standard level for
10 comparison and the communication signal, to compare the standard level for
comparison with the communication signal, and to amplify the
communication signal which is superimposed and modulated on
direct-current power on a power line,

wherein the power line communication device for vehicle is included
15 in an electronic control unit controlling respective functions of the vehicle,
connected to the power line supplying the direct-current power to the
vehicle, and configured to receive the communication signal superimposed
on the direct-current power on the power line, to separate and extract the
communication signal superimposed on a direct-current component, to
20 superimpose and transmit the generated communication signal on the
direct-current power on the power line, and to transmit and receive the
communication signal between the electronic control units.

2. The power line communication device for vehicle according to claim 1,

25 wherein the comparator unit comprises a comparator including a
first input terminal and a second input terminal,

the voltage follower comprises:

voltage-dividing resistors connected in series between a high-voltage
power source and a low-voltage power source; and

30 a capacitor configured to remove a given frequency component from

the reception communication signal and to obtain a direct-current component of the communication signal, and

5 a first junction of the voltage-dividing resistors is connected to the first input terminal, a second junction of the voltage-dividing resistors is connected to the second input terminal, and the capacitor is connected between the first input terminal and the low-voltage power source.

3. The power line communication device for vehicle according to claim 1,
10 wherein the comparator unit comprises the comparator including the first input terminal and the second input terminal,

the voltage follower comprises:

the voltage-dividing resistors connected in series between the high-voltage power source and the low-voltage power source; and

15 a filter configured to remove a given frequency component from the reception communication signal and to obtain a direct-current component of the communication signal, and

20 the first junction of the voltage-dividing resistors is connected to the first input terminal, the second junction of the voltage-dividing resistors is connected to the second input terminal, and the filter is connected to the first input terminal.